

 **Sterne Kessler
Goldstein Fox**
ATTORNEYS AT LAW



Robert Greene Sterne
Edward J. Kessler
Jorge A. Goldstein
David K.S. Cornwell
Robert W. Esmond
Tracy-Gene G. Durkin
Michele A. Cimbala
Michael B. Ray
Robert E. Sokohl
Eric K. Steffe
Michael Q. Lee
Steven R. Ludwig
John M. Covert
Linda E. Horner
Robert C. Millonig
Donald J. Featherstone
Timothy J. Shea, Jr.
Michael V. Messinger

Judith U. Kim
Patrick E. Garrett
Jeffrey T. Helvey
Heidi L. Kraus
Eldora L. Ellison
Thomas C. Fiala
Donald R. Banowitz
Peter A. Jackman
Jeffrey S. Weaver
Vincent L. Capuano
Brian J. Del Buono
Virgil Lee Beaston
Theodore A. Wood
Elizabeth J. Haanes
Joseph S. Ostroff
Frank R. Cottingham
Rae Lynn P. Guest
Daniel A. Klein

Jason D. Eisenberg
Michael D. Specht
Tracy L. Muller
Jon E. Wright
LuAnne M. DeSantis
Ann E. Summerfield
Helene C. Carlson
Cynthia M. Bouchez
Timothy A. Doyle
Gaby L. Longworth
Lori A. Gordon
Nicole D. Dretar
Ted J. Ebersole
Laura A. Vogel
Bryan S. Wade
Aaron L. Schwartz
Bashir M.S. Ali
Shannon A. Carroll

Wesley W. Jones
Matthew E. Kelley
Michelle K. Holoubek*
Marsha A. Rose*
W. Blake Coblenz*
James J. Pohl*
John T. Haran*
Mark W. Rygiel

Registered Patent Agents*
Karen R. Markowicz
Nancy J. Leith
Matthew J. Dowd
Katrina Yujian Pei Quach
Bryan L. Skelton
Robert A. Schwartzman
Teresa A. Colella
Victoria S. Rutherford

Simon J. Elliott
Julie A. Heider
Mita Mukherjee
Scott M. Woodhouse
Christopher J. Walsh
Liliana Di Nola-Baron
Peter A. Socarras
Jeffrey Mills
Danielle L. Letting
Lori Brandes

Of Counsel
Kenneth C. Bass III
Marvin C. Guthrie

*Admitted only in Maryland
*Admitted only in Virginia
*Practice Limited to
Federal Agencies

April 17, 2006

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

WRITER'S DIRECT NUMBER:
(202) 772-8831
INTERNET ADDRESS:
JWEAVER@SKGF.COM

Art Unit 2617

Attn: Mail Stop Amendment

Re: U.S. Utility Patent Application
Appl. No. 10/086,367; Filed: March 4, 2002
For: **Method and System for Frequency Up-Conversion**
Inventors: **SORRELLS et al.**
Our Ref: 1744.0020007

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Fifth Supplemental Information Disclosure Statement;
2. A listing of the cited documents on Form PTO-1449 (3 pages); and
3. One (1) return postcard.

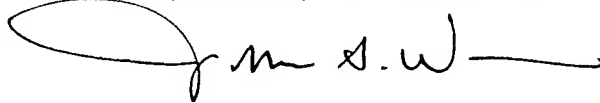
It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents
April 17, 2006
Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read 'J. S. W.', with a large, loopy initial 'J' and a horizontal line extending to the right.

Jeffrey S. Weaver
Attorney for Applicants
Registration No. 45,608

MQL/JSW:apg
Enclosures

521110_1.DOC



THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

SORRELLS *et al.*

Appl. No.: 10/086,367

Filed: March 4, 2002

For: **Method and System for Frequency
Up-Conversion**

Confirmation No.: 3679

Art Unit: 2617

Examiner: Bhattacharya, Sam

Atty. Docket: 1744.0020007

Fifth Supplemental Information Disclosure Statement

Mail Stop Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this Fifth Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Fourth Supplemental Information Disclosure Statement filed on March 3, 2006 in connection with the above-captioned application.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

Applicants provide the following comments regarding the documents:

Documents AH71, AI71 and AC72 are co-owned patents which are directed to related subject matter.

Documents AA72 and AB72 were cited in an Office Action in related U.S. Patent Application No. 10/394,069, filed March 24, 2003, entitled "Method and Circuit for Down-Converting a Signal," directed to related subject matter. Also cited in said Office Action was U.S. Patent No. 6,836,650, which has already been cited in the present application.

Documents AB72, AD72, and AE72 were cited in an Office Action in related U.S. Patent Application No. 11/173,021, filed July 5, 2005, entitled "Method and Circuit for Down-Converting a Signal," directed to related subject matter.

Documents AF72-AI72 and AA73-AG73 were cited in an Office Action in related U.S. Patent Application No. 10/305,299, filed November 27, 2002, entitled "Method and Apparatus for Improving Dynamic Range In a Communication System," directed to related subject matter. Also cited in said Office Action were U.S. Patent Nos. 5,339,459 and 5,517,688, which have already been cited in the present application.

This statement should not be construed as a representation that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below:

- ☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received

by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.

- ☒ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No statement or fee is required.
- ☐ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
- ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more

than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

- ☐ c. Attached is our PTO-2038 Credit Card Payment Form in the amount of _____ in payment of the fee under 37 C.F.R. § 1.17(p).
- ☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Enclosed find our PTO-2038 Credit Card Payment Form in the amount of \$_____ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:
- ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

- ☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.
- ☐ 6. A concise explanation of the relevance of the non-English language documents appears below in accordance with 37 C.F.R. § 1.98(a)(3):
- ☒ 7. In accordance with 37 C.F.R. § 1.98(a)(2), copies of the U.S. patents and patent publications cited on the attached Form PTO-1449 are not enclosed.
- ☐ 8. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. _____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).
- ☒ 9. It is expected that the examiner will review the prosecution and cited art in the parent application nos. 09/379,497, filed August 23, 1999 (now U.S. Pat. No. 6,353,735), and 09/176,154, filed October 21, 1998 (now U.S. Pat. No. 6,091,940), in accordance with MPEP 2001.06(b), and indicate in the next communication from the office that the art cited in the earlier prosecution histories has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed Form PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

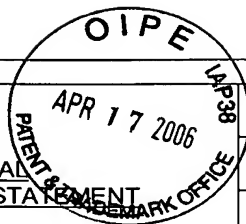
A handwritten signature in black ink, appearing to read "J. M. A. W.", followed by a horizontal line.

Jeffrey S. Weaver
Attorney for Applicants
Registration No. 45,608

Date: 4-17-06

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600

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| FORM PTO-1449 FIFTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT | | Page 1 of 3 |
| ATTY. DOCKET NO. 1744.0020007 | | APPLICATION NO. 10/086,367 |
| FIRST NAMED INVENTOR David F. SORRELLS | | ART UNIT 2617 |
| FILING DATE March 4, 2002 | | |

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOC. REF. | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB-CLASS | FILING DATE |
|---------------------|--------------|-----------------|---------|------------------------|-------|-----------|-------------|
| | AA | | | | | | |
| | AB | | | | | | |
| | AC | | | | | | |
| | AD | | | | | | |
| | AE | | | | | | |
| | AF | | | | | | |
| | AG | | | | | | |
| | AH71 | 7,010,286 B2 | 03/2006 | Sorrells <i>et al.</i> | | | |
| | AI71 | 7,010,559 B2 | 03/2006 | Rawlins <i>et al.</i> | | | |

FOREIGN PATENT DOCUMENTS

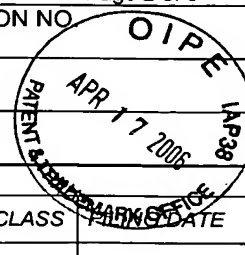
| EXAMINER INITIAL | DOC. REF. | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|---------------------|--------------|-----------------|------|---------|-------|-----------|-------------|
| | AJ | | | | | | Yes No |
| | AK | | | | | | Yes No |
| | AL | | | | | | Yes No |
| | AM | | | | | | Yes No |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

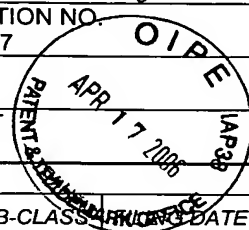
| EXAMINER INITIAL | DOC. REF. | CITATION |
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| | AN | |
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| | AP | |
| | AQ | |
| | AR | |

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| EXAMINER | DATE CONSIDERED |
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

| FORM PTO-1449 FIFTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT | | | | ATTY. DOCKET NO. 1744.0020007 FIRST NAMED INVENTOR David F. SORRELLS FILING DATE March 4, 2002 | | APPLICATION NO. 10/086,367 ART UNIT 2617 | | Page 2 of 3  |
|---|--------------|-----------------|---------|---|-----------------|---|-------------|--|
| U.S. PATENT DOCUMENTS | | | | | | | | |
| EXAMINER INITIAL | DOC. REF. | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB-CLASS | FILING DATE | |
| | AA72 | 5,131,014 | 07/1992 | White | | | | |
| | AB72 | 6,393,070 B1 | 05/2002 | Reber | | | | |
| | AC72 | 7,016,663 B2 | 03/2006 | Sorrells <i>et al.</i> | | | | |
| | AD72 | 3,694,754 | 09/1972 | Baltzer | | | | |
| | AE72 | 4,931,716 | 06/1990 | Jovanovic <i>et al.</i> | | | | |
| | AF72 | 3,617,898 | 11/1971 | Janning, Jr. | | | | |
| | AG72 | 3,764,921 | 10/1973 | Huard | | | | |
| | AH72 | 4,158,149 | 06/1979 | Otofuji | | | | |
| | AI72 | 4,380,828 | 04/1983 | Moon | | | | |
| FOREIGN PATENT DOCUMENTS | | | | | | | | |
| EXAMINER INITIAL | DOC. REF. | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION | |
| | AJ | | | | | | Yes No | |
| | AK | | | | | | Yes No | |
| | AL | | | | | | Yes No | |
| | AM | | | | | | Yes No | |
| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.) | | | | | | | | |
| EXAMINER INITIAL | DOC. REF. | CITATION | | | | | | |
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FORM PTO-1449

FIFTH SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENTATTY. DOCKET NO.
1744.0020007APPLICATION NO.
10/086,367FIRST NAMED INVENTOR
David F. SORRELLSFILING DATE
March 4, 2002ART UNIT
2617

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOC. REF. | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB-CLASS | REMARKS |
|---------------------|--------------|-----------------|---------|-----------------------|-------|-----------|---------|
| | AA73 | 4,562,414 | 12/1985 | Linder <i>et al.</i> | | | |
| | AB73 | 4,814,649 | 03/1989 | Young | | | |
| | AC73 | 4,845,389 | 07/1989 | Pyndiah <i>et al.</i> | | | |
| | AD73 | 5,172,019 | 12/1992 | Naylor <i>et al.</i> | | | |
| | AE73 | 5,263,198 | 11/1993 | Geddes <i>et al.</i> | | | |
| | AF73 | 5,551,076 | 08/1996 | Bonn | | | |
| | AG73 | 5,633,610 | 05/1997 | Maekawa <i>et al.</i> | | | |
| | AH | | | | | | |
| | AI | | | | | | |

FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL | DOC. REF. | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|---------------------|--------------|-----------------|------|---------|-------|-----------|-------------|
| | AJ | | | | | | Yes No |
| | AK | | | | | | Yes No |
| | AL | | | | | | Yes No |
| | AM | | | | | | Yes No |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

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EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.